Part 2:
Noise Issues at Renton Municipal Airport

Concerns and Issues

The following issues emerged from the discussions of the Renton Airport Advisory Committee (RAAC) from its inception in May 2001, through fall of that year. They cover a range of noise as well as related environmental and safety concerns. Figure 6, on the following page, provides a summary. Some of the concerns began to be addressed during this same timeframe, so they represent a "snapshot" in time.

Noise, air quality, vibration and safety impacts

Noise from touch-and-go activity:

Touch-and-go operations are a major concern, they can start as early as 6 AM and continue as late as 12:30 AM the next morning. At Renton, there is always a steady stream of touch-and-go activity between 10:30 and 11 PM during daylight savings months. (The airport is used not only by flight schools based at Renton but also those based at other airports because students can practice landings and takeoffs under the direction of Renton's tower.) Touch-and-go flights sometimes pass every 15 to 30 seconds over some neighborhoods, e.g. 7th Avenue on Renton's East Hill.

Jet and helicopter noise:

Many residents are concerned about these aircraft, which may operate at night or early morning. Business jets may leave early in the morning for a trip to the East Coast. Helicopters also come into Renton for emergency exercises that can be disruptive.

Figure 6: Renton Area Resident Airport Concerns and Issues

Issue Area	Resident Concern
Noise, Air Quality, Vibration and Safety Impacts	• "Touch-and-go" flights because of their long hours and persistence. • Helicopter overflights and jets. • Renton has no noise monitoring devices, so that it is not possible to measure what residents experience. • Communication of Renton noise abatement procedures to pilots (including transient operators). • Odor and emissions levels. • Vibration from aircraft operations. • Many low flights "buzzing" homes and aircraft flying through the middle of the pattern. • Many observations of what appear to be near misses over neighborhoods have created a major safety concern that has not been adequately addressed.
Impact of Transient Aircraft and Other Airports	• Noise from other airports such as Boeing Field and Sea-Tac. • Noise generated by transient traffic, both coming to and from Renton Airport, and flying over the Renton communities as it passes through the area.
Noise and Airport Planning	• Extent to which the City can encourage certain types of uses at the airport and discourage others. • Inclusion of the noise, safety and air quality impacts of the airport in evaluation criteria for selecting the preferred future for the airport.
Accountability	• Inadequate communication of existing noise abatement efforts to community. • No complaint response system for receiving, addressing, responding to and tracking resident noise and safety complaints and calls. • No information management system, no communications channel, and no statistics [e.g. complaint tracking] about the airport in general available to the public. • No airport staff is available after 5 PM weekdays or on weekends to monitor, observe first-hand and investigate noise, safety, security and other issues. • No readily available information on airport services, Fixed Base Operator (FBO) and Tower hours of operation, Tower procedures and the like. • Need for more clarity in defining the role of the airport manager and the Tower.

Source: Renton Airport Advisory Committee Meetings, 2001.

Meaningful measurement of noisy operations:

There is a concern that noise impacts are not adequately understood by those managing the airport because no noise measurements have been taken and the city lacks noise-measuring equipment.

A concern has been expressed that because the Air Traffic Control Tower is not open 24 hours a day, [7 AM to 8 PM in the winter and 7 AM to 9 PM in the summer/ daylight savings time] the counts of touch-and-go operations provided by the Tower quite substantially under-represent the real pattern of operations, and that-touch-and-goes are actually a larger proportion of all traffic than Tower numbers might indicate.

Frustrations have been expressed with FAA's noise metrics which average day-night activity and noise levels, whereas what wakes people or disturbs them is single-event noise – one or several noisy operations, not a noise contour. Renton needs an approach to noise measurement that suits its needs better than FAA's approach.

Aircraft fuel emissions:

Many residents are concerned that the area is constantly exposed to aircraft fuel emissions and that air quality in the neighborhoods is adversely affected by being in the flight path.

Aircraft vibration:

Some aircraft operations cause significant vibration – enough to make water in a glass jiggle– that is a source of discomfort for residents.

Impacts of transient aircraft and other airports

Noise from transient aircraft using Renton:

When flight instructors, students and others use Renton from other fields, it has been hard to identify who they are and reach them about the need to use the voluntary noise abatement procedures in place at Renton.

Noise from other nearby airports:

There is also a concern that noise from Seattle-Tacoma and Boeing Field/King County International Airports, particularly engine run-up noise, is impacting Renton.

Noise and airport planning

Extent to which the airport can focus on less noisy tenants as new space becomes available:

Residents understand the fact that FAA plays a role in how the airport must operate but would like a better understanding of the City's ability to encourage certain types of use on the field and discourage others.

Integration of noise, safety and air quality as evaluation criteria for the Airport Business Plan and in selecting a preferred airport future:

Given the limitations of FAA's Integrated Noise Model, which generates noise contours for a predicted annual mix of aircraft and number of flights but does not use any actual noise readings as inputs, the community wants to know how various alternative futures for the airport will be measured and evaluated in terms of noise.

Accountability

Processes for conveying noise abatement activities to the community:

Many residents do not have enough information about how noise is being managed and are unaware of the efforts the City has been making to promote noise abatement. Communication about existing efforts has been inadequate.

Complaint response system:

Residents have had varied experience with call-ins about noise problems and other issues. Some received rapid and adequate responses from the [former] airport manager and others felt they could make many calls and not know whether their concern was addressed. Some residents reported making 50 or more calls without a reply. This is in part because there has been some confusion about the respective roles of the airport manager and FAA contract staff at the Tower. Tower staff are not responsible for addressing noise concerns, yet they are often called outside regular business hours while the Tower is in operation.

Airport reporting and communications:

A related matter raised by Advisory Committee members is

that the airport does not provide any reports to the public about its activities, problem solving, programs or issues. For

example, a reporting system that would summarize complaints and their disposition would be helpful. Likewise, some practical, regular information about airport budgets and capital projects would be valuable.

Lack of after-hours personnel:

The airport manager's office closes at 4:30 PM, so calls about noise or safety events after those hours can only be left on a message machine. Many times residents feel there has been a safety issue and would like to get a rapid human response so that the situation can be addressed while it is acute.

Lack of clarity about Tower role vs. airport manager role:

The Tower is open for longer hours than the airport manager's office, and yet its role in addressing data and noise issues, and the availability of tower personnel to speak with residents, is unclear to residents.

Current Programs to Address Noise Issues at Renton Municipal Airport

Introduction	Both the City of Renton and its airport tenants have implemented measure designed to minimize the noise impact of the airport and its operations on the community. These measures are outlined below.
Source control: Making aircraft quieter	At Renton, existing tenants have taken initiatives to make their aircraft quieter as a gesture of good will towards airport neighbors although they are not required to do so. For example, Northwest Seaplanes has equipped its 16 seaplanes with new three-blade instead of the standard two-blade propellers at a cost of $20,000 per aircraft exclusively to minimize noise. Another tenant, Pro-Flight, is no longer offering twin-propeller airplane flight instruction from Renton, at a considerable cost in lost business.

Operations control: Routing aircraft to minimize noise impact on communities

Ground procedures:

At Renton, engine run-up areas are located strategically to minimize noise. Boeing, which needs to carry out engine run-ups to ensure that its brand-new aircraft are safe before they take off, has constructed noise walls and voluntarily limits the hours during which it conducts engine run-ups.

Air traffic procedures:

At Renton, the Boeing Employees' Flying Association took the lead in developing these voluntary noise abatement procedures. The procedures are available on the airport's website. Standard websites providing information on the nation's airports to pilots, such as airnav.com, also indicate that noise abatement procedures are in place and provide contact information. The proposed voluntary noise abatement procedures for Renton are presented in Appendix B. The procedures suggest the use of the Best Rate of Climb and/or Best Angle of Climb, make suggestions about the level of altitude at which pilots should pass over certain land marks during takeoff and landing, and provide desired power and RPM settings for aircraft with constant speed propellers.

Renton Airport Advisory Committee Recommendations

The Renton Airport Advisory Committee (RAAC), in the fall of 2001, developed a set of recommendations to further address noise issues at the airport. The voluntary noise abatement procedures are a major first step; the Committee addressed additional steps it would like to see pursued. Figure 7 summarizes these recommendations. The following provides a more detailed outline of the recommendations of the Advisory Committee:

Work with tenants to pro-actively publicize Renton's noise abatement procedures

Tenants of Renton Municipal Airport fly friendly, using the voluntary noise abatement procedures whenever conditions allow. They estimate that currently, about 700-800 pilots using the airport follow these procedures. However, since about 45 percent of all take-offs and landings at Renton are by aircraft that are not based at the airport, a significant number of pilots using the airport do not yet follow the procedures.

This recommendation calls for the City Council to provide funding for City staff to continue to pro-actively publicize the noise abatement procedures. The Committee suggests that staff work with the noise officers and flight schools at nearby airports to ensure that transient pilots and new flight trainers are aware of the procedures. The Committee also recommends that, to the extent possible, FAA and FAA-contract tower staff support the noise abatement procedures.

Carry out noise readings in the neighborhoods

The 65 DNL noise contour for Renton Municipal Airport is almost entirely within the airport boundary, and the current Master Plan for the airport indicates that there will be only insignificant change in the next 15 years. However, airport neighbors represented on the Committee are concerned about single-event noise in the areas surrounding the airport. They are also aware that some of the noise is coming from aircraft using Boeing Field or Sea-Tac International Airports but do not know how much of the problem is generated by these aircraft.

This recommendation directs the City to seek assistance to undertake noise readings that can provide information on the volume, intensity, duration, frequency, and sources of aircraft noise. Noise monitoring equipment might be borrowed from Boeing Field or Sea-Tac International Airports. The information gained from the readings could then be used to further refine the voluntary noise abatement procedures or work with individual pilots, the FAA and other airports to minimize the noise impact on the neighbors of Renton airport.

Figure 7: RAAC Recommendations for Addressing Airport Noise

RECOMMENDATION	SUGGESTED IMPLEMENTATION TOOL	RAAC EDITS/ CONCUR / DISAGREE	ADMINISTRATION POSITION
· Working with tenants, continue to proactively publicize Renton's voluntary noise abatement procedures, coordinate with noise officers and flight schools at other nearby airports and with FAA, and support the RAAC.	Council budget action (ordinance)	Concur 10/15	Support
· Use specialized assistance to undertake an ongoing series of noise readings in the neighborhoods to address volume, intensity, duration, frequency and sources of noise.	Council budget action (ordinance)	Concur 10/15	Support
· Create a tracking system for noise and other airport complaints.	Airport manager action	Concur 10/15	Support
· Create a physical model of the airport area and its airspace to facilitate understanding of the system.	Staff action, possible Council budget action	[New Oct. 8.]	Oppose, value does not justify cost.
· Continue the RAAC with staff/consulting support, publish and publicize voluntary noise abatement measures and: – Create a RAAC work plan for 2002 that continues to address noise issues; and – Empower the RAAC to specifically address aircraft safety over the neighborhoods.	Airport Manager action Council Transportation Committee Directive	Concur 10/15 Concur 10/8	Support publicizing voluntary noise abatement measures. If RAAC is continued, should be supported by airport manager and city staff, not by consultant. Oppose use of consultant for development of a RAAC workplan for 2002. RAAC addressing safety is not feasible.

• Undertake a Part 150 study to: – Identify the current and future contours in relation to the Business Plan's final forecasts; and – Identify operations and land use mitigation actions to be implemented in the near term (1-3 years) as well as beyond.	Council budget action	No action. See text for discussion.	Strongly opposed.

Source: Renton Airport Advisory Committee Meetings, 2001.

Create a tracking system for noise and other airport complaints

One of the issues identified by RAAC members was that there is no consistent, reliable system for tracking noise. This is frustrating for airport neighbors and the tenants, city staff, and FAA-contract staff at the tower who may receive calls with noise complaints from the neighbors.

Under this recommendation, the airport manager would develop a system for receiving and tracking noise (and other airport-related) complaints and develop mechanisms for addressing and responding to these complaints.

Create a physical model of the airport area and its airspace

In its attempt to understand the nature of noise (and safety) issues, the Committee's neighborhood representatives struggled with the complexity of the airspace above Renton Airport and its impact on the traffic patterns of aircraft using the airspace over the airport. Renton is located under the airspace for aircraft using Sea-Tac International Airport, one of the nation's major commercial service airports. This limits the airspace pilots flying under visual flight rule can use.

The neighborhood representatives also had difficulty understanding the rules under which pilots use the available airspace. At times, they witnessed what they perceived as near misses above their homes, yet pilot members of the Committee indicated that this is due to the fact that the vertical separation that exists between aircraft is difficult to see from the ground.

A model of the airport area and the airspace above it could help both current RAAC neighborhood representatives and other concerned residents understand the complexity of the rules governing air traffic above Renton. Appendix C provides a verbal overview of the airspace above Renton and the procedures used to ensure safe operation of aircraft above Renton. The Advisory Committee noted but did not yet act on this recommendation.

Continue to convene the RAAC

Both aviation and neighborhood representatives of the Committee are interested in continuing the work of the RAAC, whose membership is for three-year terms. To continue the work of the Committee beyond 2001 will require funding for staff and/or consultant support.

The Committee also would like to develop a work plan for 2002 that continues to address noise issues and supports continued work on voluntary noise mitigation measures. It also

asked the City Council to specifically address aircraft safety over the neighborhoods.

Undertake a Part 150 study

Committee members were unified in their conclusion that there is a need for further studies of the noise problem to better target solutions. There were differences in opinion, however, about how and when this should be accomplished.

Some members felt it was a good idea to carry out a Part 150 study to determine what the impact of the Airport Business Plan—which was developed concurrently with the Noise White Paper—on the noise contours would be. Some also felt that a Part 150 study could help identify operational changes and land use mitigation actions to address noise in the near term and beyond.

On the other hand, some members—and this is a position that was shared by City staff—felt that a Part 150 study would not address noise problems at Renton adequately. This is because of perceived limitations of the FAA prescribed methodology. Based on the FAA methodology, there are no noise problems outside the boundary of the airport that can be mitigated with federal funds. This is because FAA mandates the use of standard noise measurement units and methodologies and the 65 DNL for the purpose of determining whether a problem exists. These members indicated that they support a recommendation in the current Airport Master Plan, which suggests a non-federal noise study designed according to local needs.

City staff indicated that "the Administration opposes the recommendation to undertake a Part 150 Study in that the criteria established by the FAA (use of the Integrated Noise Model and noise averaging) will pre-destine such a study to futility and represents a very needless expenditure."

The FAA approach also calculates noise using only projected fleet mix and levels of operations, and does no utilize any local noise readings to arrive at noise contours. It may be best to obtain some single-event noise readings to determine level and patterns of noise, then re-evaluate the pros and cons of a Part 150 based on this additional data.